

## REMARKS

The claims in the application remain 1-20 and Claim 21 added by the present amendment.

Favorable reconsideration of the application as amended is respectfully requested.

A replacement sheet of Fig. 1 is enclosed on which the various symbols have been labeled, in accordance with the request at the top of page 2 of the Office Action. Approval of the enclosed drawing correction is accordingly respectfully requested. Therefore, the only outstanding issue is the art rejection of the claims.

More specifically, Claims 1-5, 12-18 and 20 have been rejected under 35 U.S.C. §102 as being anticipated by U.S. Pat. No. 5,144,801 to Scanderbeg et al, while Claims 1-3, 5-12, 18 and 19 have been rejected as anticipated by U.S. Pat. No. 4,761,954 to Rosman and Claims 1-3, 5 and 12-14 rejected as anticipated by DE 4,328,906 (cited in the International Search Report). However, it is respectfully submitted all pending claims herein recite patentable subject matter over the applied art, for the following reasons (reference will be made to preferred embodiments of the present invention illustrated in the drawings of the present application).

As described, e.g., in the background portion of the present application, the present invention explicitly improves over prior art hydraulic systems in which fluid flow is controlled by a series of valves such as throttle or directional valves. Such control with valves generate heat, in turn necessitating expensive cooling arrangements.

In contrast, with the present invention hydraulic fluid flow is substantially controlled only by the pump 12 in the hydraulic system. In other words, flow of hydraulic fluid to and from a cylinder 1 forming part of the hydraulic means is not controlled by any valves in the fluid flow circuit 11 in which the pump 12 and cylinder 1 are positioned. As described, e.g., in the summary portion of the present application, unnecessary generation of heat and concomitant energy loss are avoided, while the pump 12 need only be powered when the hydraulic cylinder 1 is actually operated. Furthermore, work from the pump 12 is directly related to controlling the hydraulic means 1.

Thus, e.g., smaller movement of the piston 2 within the cylinder 1 requires less work by the pump 12. Less overall hydraulic fluid is required in the inventive system with need to superfluously circulate hydraulic fluid to maintain desired control having been eliminated. The motor 13 arranged to power the pump 12 can also be used for regenerating energy obtained from the hydraulic drive means 1 (no further devices for regenerating energy need be required).

These and other advantages are explicitly attained by the invention as recited in amended independent Claim 1 herein and which is directed to a hydraulic system comprising at least one hydraulic drive means 1 and a conduit system 10 connected to the hydraulic drive means 1 and in turn, having a circuit 11 containing hydraulic liquid and connected to the hydraulic drive means 1. A pump 12 powered by a motor 13, is situated in the circuit 11 for generating hydraulic fluid flow.

The pump 12 controls the flow of hydraulic fluid in the circuit 11, with the hydraulic drive means being controlled by substantially controlling the flow of hydraulic fluid only by the pump 12. More particularly, there are no valves such as throttle or directional valves present in the hydraulic fluid circuit 11, except for a single valve 15 positioned between the pump 12 and hydraulic drive means 1 simply for fixing the hydraulic drive means in position when closed (a passive valve). The amendment to independent Claim 1 herein finds clear support throughout the present application and drawings, e.g., on page 2 and at page 9, lines 8-20, while Claim 21 introduced herein finds explicit support in the drawing and accompanying description in the specification.

The features of the presently claimed invention together with the accompanying advantages attained thereby are neither disclosed nor suggested by the applied art, for the following reasons.

Basically, it is asserted in the Office Action, all three applied citations teach controlling hydraulic means such as a piston by only controlling a pump. However, DE 43 28 906 shows two pumps in the circuit illustrated in Fig. 2, namely a variable displacement pump 12 and a fixed displacement pump 21. While Fig. 1 of DE 43 28 906 might illustrate just one pump 12, nevertheless both these figures illustrate positioning of two one-way check valves 15.

In Rosman, solenoid valve 47 and servo valve 46 control hydraulic flow by controlling, e.g., positions of the various check valves 35, 37, etc. (column 3, lines 30-50). In Scanderbeg et al, a relief valve 68 also controls fluid flow in the hydraulic circuit (column 5, lines 44-56) together with the pump 23. The remaining art of record has not been applied against the claims and will not be commented upon further at this time.

Accordingly, in view of the forgoing amendment and accompanying remarks, it is respectfully submitted all claims pending herein are in condition for allowance. Please contact the undersigned attorney should there be any questions. A petition for an automatic one month extension of time for response under 37 C.F.R. §1.136(a) is enclosed in triplicate, together with the requisite petition fee and fee for additional claim introduced herein.

Early favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "G. M. Kaplan", is written over a horizontal line.

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